Docket No.: **181-018A**

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

PATENT OPERATION

In re Application of:	
Peter Dronzek	Group Art Unit: 1733
Serial No.: 09/875,738	Examiner: Gallagher, J.
Filed: October 3, 2002	

For: **TECHNIQUES FOR LABELING PLASTIC, GLASS OR METAL CONTAINERS OR SURFACES WITH POLYMERIC LABELS**

Commissioner for Patents
P.O. Box 1450
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DECLARATION UNDER 37 CFR 1.132

I, Leslie Fernandez, declare that I have an associates degree in chemistry and have about 25 years of industrial experience as a chemist. I was asked to review a translation of German Patent (the Patent) No. 1 569 879 with regard to carrying out an experiment to duplicate Example 3 of the Patent.

After reviewing Example 3, I obtained samples of the materials specified in the Patent. I purchased from Sigma-Aldrich Chemicals 1, 2, 3, 4,-tetra-hydronaphthalene; 2-ethoxyethanol; methacrylic acid and methylmethacrylate.

I obtained a solution of 40% polyvinyl methylether in toluene from Monomer-Polymer. I also obtained 50 micron

polyvinyl chloride (PVC)film as 40 micron polyvinyl chloride film was not obtainable. I also obtained 50micron polyethylene terephthalate (PET) film.

I then proceeded to make the "plastic solution" as described in Example 3 of the Patent by making and initial mixture of 61.5 g of 2-ethoxyethanol and 20.5g of the 1,2,3,4,-tetrahydronaphthalene by stirring. In a separate container, 30g of (35% methacrylic acid and 65% of methylmethacrylate) were prepared. An 18.g aliquot of the 35% methacrylic acid and 65% of methylmethacrylate mixture was added to the mixture of 2-ethoxyethanol and 1, 2, 3, 4-tetrahydronaphthalene and then added 62.5g of polyvinyl methyl ether (40% in toluene) A clear solution was obtained which was readily pourable. A density determination was carried out in a pycnometer and the density was 7.81 lbs gallon. The percent solids was determined to be 15.5% w/w.

The 50 micron polyvinyl chloride film was coated with the plastic solution using number 14 and 24 coating rods before apply (2 passes) and carefully dried with a heat gun for 10-15 minutes a coat weight of 6.6 - 9.7g sq meter (7.98 av.) (dry substance).

The 50micron polyethylene terephthalate film was coated using the same technique to apply a coat weight of 8.3 - 9.6g./sq meter (9.1 av.) (dry substance) except that drying was carried out at a temperature of 145°C in a forced hot air oven for 10 minutes after each coating was applied.

Three control runs on 20 lb bond paper were also carried out by using the same coating technique to provide coat weights of 7.89g/sq.m; 8.53g/sq.m and 6.22g/sq.m.

Four 2.5." X 2.5" sections were cut from the central section each of the coated films. The 2.5" X 2.5" sections of dried PVC and PET sheets exhibited a high degree of surface

tack on the surface side, after prolonged drying. The degree of tack was similar to commercially available pressure sensitive cellophane tapes. The dried PVC and PET sheets were mounted on a silicon treated release surface to prevent adhesion between the separate dried PVC sheets and the separate dried PET sheets and other surfaces. When samples of the dried PVC films and PET films were stacked upon each other in accordance with the physical arrangement of labels in a cut and stack label operation the dried PVC films and the dried PET films became tightly adhered to one another as if they were layers of pressure sensitive cellophane tape that were superimposed on one another.

The coated paper sample dried to non-tacky surface that appeared to be useful for a cut and stack label application.

After two weeks of shelf storage 2.5." X 2.5" section of the coated PVC films and the coated PET films were coated with various commercial aqueous adhesives. The adhesive was applied by drawing the adhesive down onto a glass plate with a 24 rod. The 2.5." X 2.5" coated film samples were placed on the adhesively coated glass plate and removed from the glass plate prior to being placed onto a glass jar, a high density polyethylene container and a beer bottle. The labeled containers were stored at room temperature for two weeks and there often were immersed in a bath containing a 50:50 mixture of ice and water for 24 hours. The containers were removed and evaluated for flagging, force to remove the label and slip.

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to by true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application and of any patent issued thereon.

Dated: 6/5/2003

Leslie Fernandez

Leslie Fernandez

TABLE 1

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	Flagging (inches or %)	Force To Separate Labels From Container	CoatWeight Weight (g./sq.m.)	Wet Tack	Observations	Adhesive
GLASS JARS						
PVC 1	1/4"	minimal	9	good	transferred to both surfaces, flagged edge has a slippery surface.	1
PVC 3	1/4"	moderate	7.5	good	coating transferred to bottle, flagged edge has a slippery surface	2
PVC 3	67%	minimal	7.5	poor	coating & adhesive gone	3
PET 3	1/4"	very strong	8.3	good	coating transfers to bottle	1
PET 1	1/2"	very strong	9.1	good	adhesive transferred to bottle	2
PET 1	67%	minimal	9.1	poor	coating transfers to bottle	3
PLASTIC BOTTLES						
PVC 5	none	very strong	7.1	good	transferred to both surfaces a	4
PVC 5	none	very strong	7.1	good	transferred to both surfaces b	4
PVC 5	50%	moderate	7.1	poor	coating transferred to bottle a	5
PVC 5	50%	minimal	7.1	poor	transferred to both surfaces b	4
PET 5	1/4"	very strong	9	good	transferred to both surfaces a	5
PET 5	none	very strong	9	good	transferred to both surfaces b	4
PET 5	minor	minimal	9	good	transferred to both surfaces a	5
PET 5	1/2"	minimal	9	good	transferred to both surfaces b	5
BEER BOTTLES						
PVC 3	1/4"	very strong	7.5	good	transferred to both surfaces	2
PVC 1	100%	minimal	9	poor	coating & adhesive gone	1
PVC 3	100%	minimal	7.5	poor	coating & adhesive gone	3
PET 1	3/8"	very strong	9.1	good	transferred to both surfaces	2
PET 3	3/4"	very strong	8.3	good	transferred to bottles	1
PET 1	50%	minimal	9.1	poor	transferred to both surfaces	3

Adhesives

1 Non-casein starch
2 Casein starch
3 Non-casein starch for paper
4 Resin 32-27-2-02
5 Resin 20-2648